

REMARKS

Applicant, his principal representative in Germany, and the undersigned have reviewed the third, non-final Office Action of March 29, 2004 in the subject U.S. patent application, together with the prior art cited and relied on by the Examiner in the rejection of the claims. Claim 1 has been amended in an effort to more clearly patentably define the subject invention over the prior art of record. It is believed that claim 1, as currently amended, is patentable over the cited prior art applied against it. Reexamination and reconsideration of the application, and allowance of the claims is respectfully requested.

The method recited in currently amended claim 1 is one that is usable to produce a printing plate by refurbishing a previously used similar printing plate. A plate that was previously used in a multi-color printing task is removed from a forme cylinder. The previously used plate is conducted from the forme cylinder to a printing plate neutralizing device which is separate from the forme cylinder and which is used to remove previously applied print images from the previously used plate. A coating is then applied to the neutralized plate and the now neutralized and coated plate is secured in proper registration on an exposure and development unit. The registration of the neutralized and coated plate is accomplished by using the registration system that is assigned to the forme cylinder to which the refurbished plate will be returned. The neutralized and coated printing plate is provided with new images and print from digital data sets. These new images and prints are then developed in the exposure and

development unit. The neutralized and coated, previously used printing plates, which have now been exposed and developed are returned to the forme cylinder. There, they are re-applied in proper registration to the forme cylinder. The printing forme can then be placed back into use.

Claims 1, 3 and 9 were rejected in the Office Action of March 29, 2004 under 35 U.S.C. 103(a) as being unpatentable over U.S. patent No. 4,116,715 to Smiggen, in view of U.S. patent No. 5,623,877 to Muth and further in view of U.S. patent No. 6,112,664 to Naniwa. Claim 5 was rejected under 35 U.S.C. 103(a) in view of the above combination and further in view of U.S. patent 6,510,795 to Detmers. Claim 7 was rejected under 35 U.S.C. 103(a) over the combination of references applied in the rejection of claims 1, 3 and 9 and further in view of U.S. patent No. 4,718,340 to Love.

Claim 1 has again been amended in an effort to more clearly patentably define the present invention over the prior art cited and relied on in the rejection of the claims. It is believed that the Smiggen reference does not teach or suggest the claimed invention. It is further believed that the secondary references cited by the Examiner and asserted as being combinable with the primary Smiggen reference do not have any teaching that would suggest the asserted combinations. It is believed that their combinations are based primarily on hindsight, and not on any teaching, or suggestion in the several documents.

In the discussion of the Smiggen reference that is set forth in the Office Action of March 29, 2004, it is recited that Smiggen teaches a method for producing multi-color

printing plates. It does not appear that such a teaching is set forth in the Smiggen document. It is recited that a photopolymer layer is cleaned from a photopolymer printing plate. In Smiggen it is recited that a developed photopolymer layer is removed from a plate by exposure of the layer to hot water and by "gently scraping the swollen polymer from the substrate." This is not a sufficient disclosure to support an assertion that Smiggen provides a printing plate neutralization device which is usable to remove images and print from a plate. Smiggen teaches that a layer of a material on a plate can be removed by exposing it to boiling water and by scraping it off. Neutralization does not necessarily require the physical removal of a layer from a substrate. It could as easily mean a process in which prior images and print are erased from the plate. The Examiner's interpretation of the Smiggen reference in this context is one that is not supported by the document itself.

Similarly, Smiggen does not teach, or suggest the provision of a printing plate exposure and development unit. Smiggen recites that the plates are rendered clean, with their underlying surface having sufficient smoothness so that a photopolymer can be deposited and that the plates can be used for subsequent development. The "subsequent development" is not disclosed or discussed in the Smiggen document. The assumption that the reference provides a printing plate exposure and development unit is not provided with any support in the reference. The "subsequent development" could take place at any time and in a facility which is not part of the plate cleaning device of Smiggen.

There is also no teaching, or suggestion in the Smiggen reference of the step of providing new images and print on the plate in the exposure and development unit. Since Smiggen does not teach, or suggest an exposure and development unit, it cannot then also teach the application of new images and print to the plate in such a unit. All Smiggen properly can be understood as teaching is that a plate is cleaned of a photopolymer layer so that at some future time, in an unknown location, it can have a photopolymer placed on it for subsequent development. After printing, which can be construed as the step of using the recoated plate in a printing process, the plate is cleaned again.

The teachings missing from the Smiggen reference are not provided in either of the secondary references relied on. In the patent to Muth, No. 5,623,877 there is shown a method and a device for the preparation of a printing plate. This is a device which suspends a printing plate by its leading edge and which stores the plate in a plate preparation device. Once the plate is situated in the plate preparation device, that device is moved to a printing plate mounting or standby position where the plate is then able to be removed from the device and applied to a plate cylinder.

Muth teaches that a previously prepared printing plate can be held in the plate preparation device so that it will be readily securable to a plate cylinder after a prior plate has been removed. This is not the same as the recitation in currently amended claim 1 that the plate neutralizing device is located remote from the printing forme cylinder. It is clear that the plates, which are removed from the cylinder in the present

invention go through several steps before they are returned to the cylinder. These steps may take a substantial time to complete. While the current plate is being neutralized, coated, provided with new images and print, the printing forme cylinder is typically not standing idle waiting for the re-application of that specific plate. The teaching in Muth that a preparation of a plate off-press is accomplished, does not lead to the assertion that this will lead to the plate being "... prepared quickly so that the printing press will not have to stand idle for a long period of time.". The location of the plate preparation device "off-press" has nothing to do with the preparation of the plate so that the printing press will not have to remain idle for a long period of time. The two do not have anything to do with each other. Once a used plate is removed from a forme cylinder, a different plate that has been provided with new images and print will be applied. The press does not stand idle while a single plate is recycled. Muth teaches that a prepared printing plate is placed in a plate preparation device and that the device is moved to a plate mounting or standby position. The subject application discloses the revitalization of printing plates. It does not teach that a single plate is refurbished and returned to the forme cylinder while the cylinder and the printing press, of which is a part, sit idle. Neither Smiggen nor Muth disclose such a procedure.

Smiggen recites that the plates are exposed to boiling water, at Column 3, lines 36 and 37 and that the plates are exposed to hot water by immersion of the plates in boiling water, as recited at Column 3, lines 22-25. While the Examiner asserts that this would be done by removal of the plates from the cylinder, there is no teaching, or

suggestion of such a step in Smiggen. Depending on the size of the cylinder, and its construction, it is just as likely to assume that the cylinder and plate are immersed as a single unit.

The Smiggen and Muth patents are silent regarding the use of a step of securing the neutralized and cooled printing plates to an exposure and development unit in proper registration by using a printing plate registration system that makes use of the registration system of the printing plate. These two references do not discuss, or teach any type of refurbishment of a printing plate. They do not teach, or suggest the use of any type of registration system.

The secondary reference to Naniwa is directed to a plate making apparatus. A cutter 23 is placed between a storage section 21 for a roll of plate material and an exposure section 25. The cutter 23 is used to cut the roll of material into a sheet. A punch 30 is used to punch holes that are usable to secure the resultant plate to a plate cylinder. As discussed at Column 3, lines 36-41 of Naniwa, exposure and printing of the plate, which is cut from the roll of material, is done based on the reference holes. This use of the registration holes makes registration in multi-color printing easy to prepare.

This recitation in Naniwa does not provide any support for the assertion in the Office Action that this secondary reference could be used with Smiggen to insure that the plates are in proper alignment for exposure and development. Initially, Smiggen does not provide any teaching, or suggestion of a registration unit. The secondary

reference to Naniwa merely teaches that the placement of holes in the same location in several plates makes registration in multi-color printing possible. In multi-color printing there are provided a plurality of individual color receiving printing plates. These plates each apply their specific color to either a transfer cylinder or directly to the material to be printed. It is important that the plates be properly aligned, with respect to each other so that the several colors will be properly positioned, with respect to each other. In Naniwa, each plate that is produced, is provided with reference holes. The holes are located in the same position in each plate. This serves as a common point of reference so that the several plates which are required to accomplish multi-color printing, can be brought into proper registration. This is not the same, or similar to the recitation in claim 1 of the subject application that the plates are secured in proper registration using the printing plate registration system. There is no teaching or suggestion in Naniwa of such a step.

For the above reasons, it is believed that currently amended claim 1 is patentable. It recites a method of producing multi-color printing which is not taught or suggested by the three patents cited and relied on by the Examiner, taken either singly, or in combination.

Claims 5, 7 and 9 depend from believed allowable currently amended claim 1 and are also believed to be allowable. The language of claim 3 has been included in claim 1. As discussed above, that feature of the invention is not shown or suggested in the references cited and relied on by the Examiner, taken either singly or in combination.

Claims 5, 7 and 9 all depend from currently amended claim 1 and are also believed to be allowable.

The additional prior art materials also of record have again be reviewed. Since they were not relied on in the rejections of the claims, no further discussion thereof is believed to be required.

SUMMARY

Claims 1 and 9 have been amended. Claim 3 has been cancelled. Claims 2, 4, 6 8 and 10 were previously cancelled. Claims 5 and 7 are carried forward. It is believed that all of the claims now pending in the subject application are allowable over the prior art of record, taken either singly, or in combination. Allowance of the claims, and passage of the application to issue is respectfully requested.

Respectfully submitted,

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